3918

GLEN C. SANDERSON

JOB COMPLETION REPORT

INVESTIGATIONS PROJECTS

As Required by

FEDERAL AID IN WILDLIFE RESTORATION ACT

COLLECTION AND ANALYSIS OF DEER HARVEST DATA

Pittman-Robertson Project W-15-R-14

Job No. A4-57

M. O. Steen, Director

Nebraska Game, Forestation & Parks Commission

L. P. Vance
Chief of Game Division

W. J. Bailey
Assistant Project Leader

W. J. Bailey
Investigator

Report for the period

October 4 to November 5, 1957

University of
Illinois Library
at Urbana-Champaign
Oak Street

A4-57

COLLECTION AND ANALYSIS OF 1957 DEER HARVEST DATA

by William J. Bailey, Jr.

ABSTRACT

Data for the 1957 deer harvest were collected by checking all harvested deer at publicized check stations.

Of 12,174 permittees, 8,450 bagged a deer for a hunting success of 69.4 percent. The highest success rate was in the Sandhills Management Unit (83.4 percent) and the lowest was in the Elkhorn Unit (25.3 percent).

The proportion of white-tailed deer in the harvest was lower than in 1956, decreasing from 5.24 percent in 1956 to 3.5 percent in 1957.

The over-all buck:doe:fawn ratios for units open to either-sex hunting were 78:100:60 as compared to 107:100:72 in 1956. For 1,960 mule deer recorded as fawns, the sex ratio was 114 males:100 females. Age data were presented and compared to past years.

The major portion of the kills for units open to either-sex hunting occurred during the first two days, regardless of length of season. Kills in units open to bucks-only hunting were well distributed throughout the season.

The general physical condition of mule deer in the harvest was better than in 1955 and 1956.

Mean weights of yearling mule deer increased 8.2 pounds for males and 3.7 pounds for females over the mean weights of 1956. These increased weights were attributed to two factors: (1) a better growing season in 1957 resulting in better summer range; and (2) harvesting of deer during October and November, prior to or at the beginning of the rut, as opposed to a harvest in December during or after the rut.

Mean weights of fawns harvested in October were less than those harvested in December of 1956. However, those harvested in November equaled or exceeded those taken in 1956.

JOB COMPLETION REPORT

INVESTIGATIONS PROJECTS

State of Nebraska

Project No. W-15-R-14 Job No. A4-57

Title of Job: Collection and Analysis of 1957 Deer Harvest Data

Objectives: To obtain information pertaining to the following:

(1) number of deer harvested and the hunting success; (2) distribution of the harvest within each management unit; (3) species, sex and age composition of the harvest; (4) day of kills; and (5) physical characteristics of deer harvested.

General: The 1957 deer season was the ninth consecutive open season in western Nebraska and the fifth consecutive season in northcentral and northeastern Nebraska. Counties open to deer hunting for the first time in recent history included Loup, Garfield and Pierce Counties.

The area open to hunting was divided into seven management units. Distribution and numbers of hunters were controlled by issuing a limited number of permits for each unit. Areas opened to deer hunting in 1957 are shown in Figure 1.

Since 10,000 permits were authorized for the Pine Ridge Management Unit and most of the hunting occurs in the timbered escarpment, an area occupying only an estimated 785 square miles, a split-season was declared to control the opening-day influx of hunters. Most ranchers in the area are capable of accomodating only a limited number of hunters and the feeling was prevalent that 10,000 hunters would over-saturate the unit.

Numbers of permits authorized, numbers of permits issued, season dates and season bag limits are shown in the following table.

Management Unit	Season Dates	No. Permits Authorized	No. Permits Issued	Season Bag Limits
Pine Ridge - 1st	Oct. 4-13	5,000	3,748	1, either sex
Pine Ridge - 2nd	Nov. 1-11	5,000	3,195	1, either sex
Plains	Nov. 1-5	1,000	607	1, either sex
Upper Platte	Nov. 1-5	2,500	1,772	1, either sex
Sandhills	Nov. 1-5	1,800	1,783	1, either sex
Upper Missouri	Nov. 1-5	500	495	1, antlered deer with a fork on at least one antler
Elkhorn	Nov. 1-5	200	174	1, antlered deer with a fork on at least one antler
Halsey	Nov. 1-5	400	400	1, either sex
TOTALS		16,400	12,174	

Techniques: Check stations were established at publicized points throughout the areas open to deer hunting. Each successful hunter was required to present his animal to personnel at one of the check stations to have it officially sealed and the permit cancelled.

In most instances local personnel were hired to operate stations. Each check station operator was given a detailed set of instructions on check station procedure and data to be recorded. These temporary, untrained check station operators attached an official metal seal to each animal and cancelled permits. They recorded the following information for each deer checked: (1) seal number; (2) permit number; (3) species; (4) sex; and (5) age (adult or fawn).

Trained game technicians worked at some of the stations in each management unit to obtain biological data. The personnel obtained data on age, weights, antler measurements and length of tarsus. Measurements were stressed for yearlings and fawns although some physical data were recorded for older deer. Severinghaus' method was used for aging.

Biological data for yearlings and males were later transferred to McBee Keysort Cards to facilitate tabulations.

Summary of 1957 Deer Seasons By Management Units

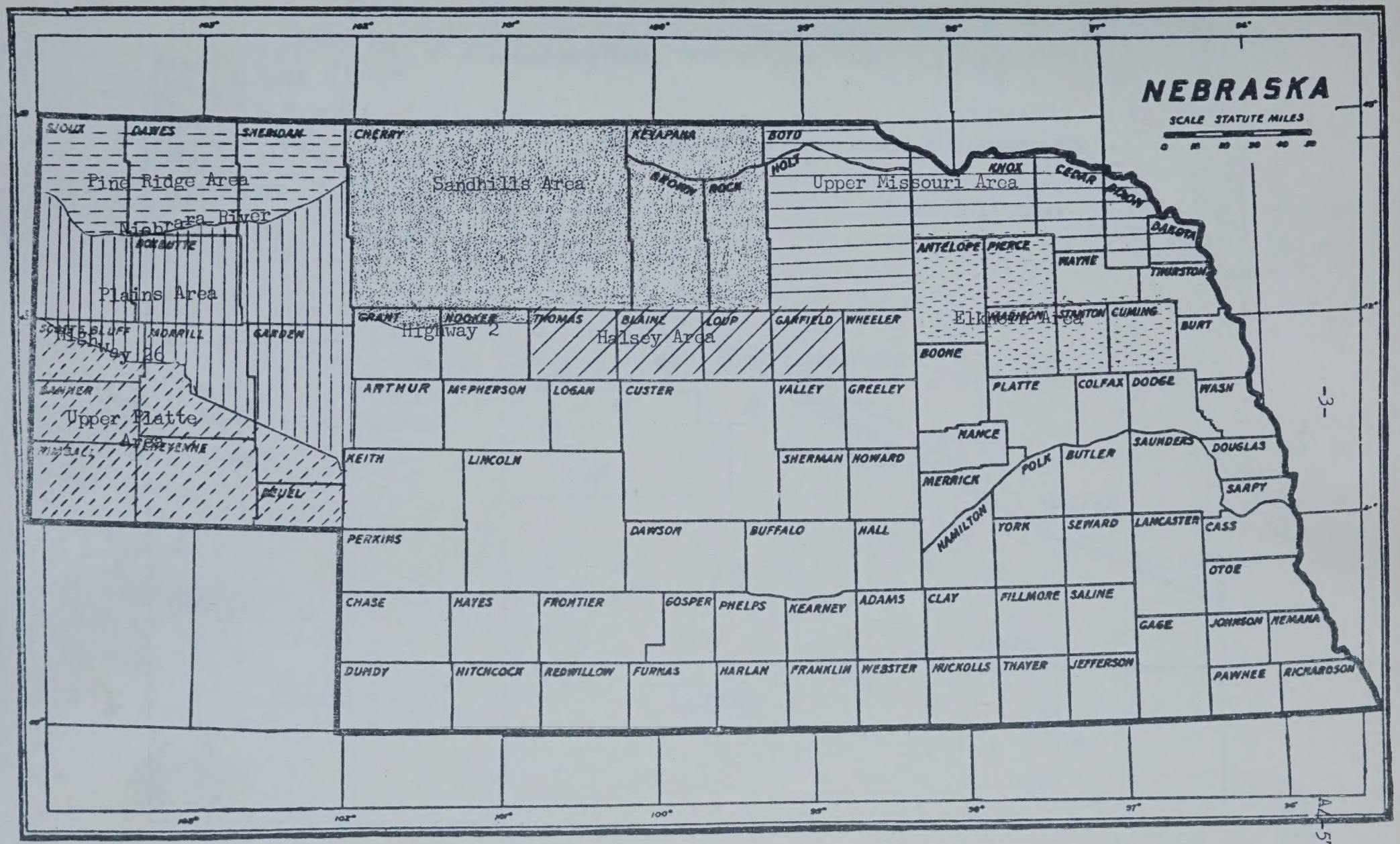
Upper Platte Management Unit:

Number of deer harvested and the hunting success: Of 1,772 permittees, 1,211 were successful in bagging deer, making a hunting success of 67.3 percent. The success rate was lower than in 1956 when 79.9 percent of the hunters were successful. However, hunting pressure was more concentrated in 1957 since the open area comprising the management unit was restricted to less than half the area of the unit in 1956. This undoubtedly resulted in keener competition between hunters for available animals, functioning, in part, to reduce hunting success.

Distribution of harvest: Distribution of the harvest is shown in Figure 2. Almost 64 percent of the deer were taken from sub-management units in the Wildcat Hills (units 4, 5, 6 and 7). In 1956, 1,146 deer were killed within the unit as open in 1957. Of these, 48.3 percent were taken from sub-units in the Wildcat Hills.

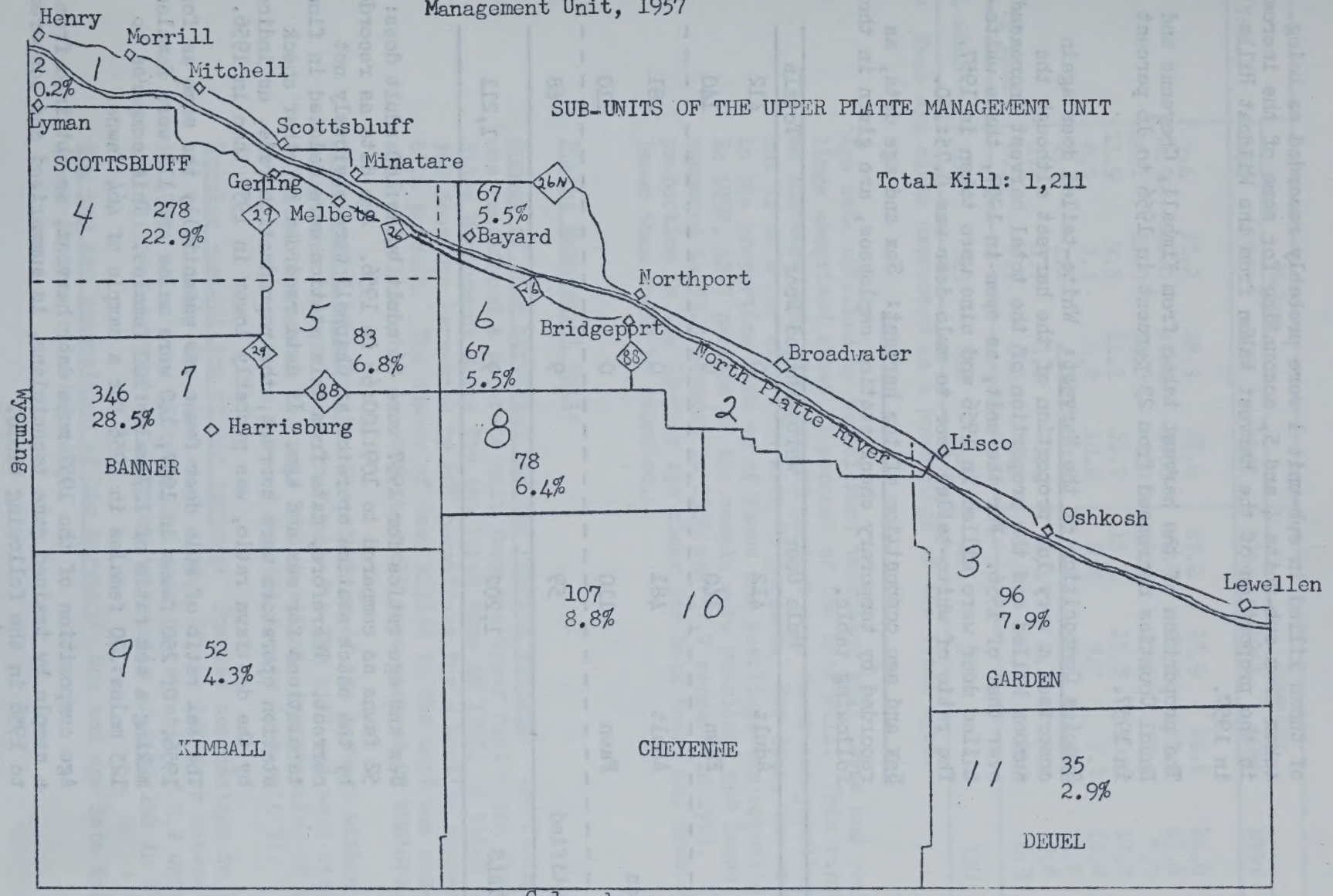
The number of deer reported killed along the western part of the North Platte River (sub-unit 1) was obviously low. This was undoubtedly due to failure of the check station operator to record location of kill accurately. In 1956, 72 animals were reported killed along this portion of the North Platte River and in 1957, only two deer were reported taken from this area. Most

Figure 1. Management units open to deer hunting in 1957



A4-57

Figure 2. Distribution of harvest in the Upper Platte Management Unit, 1957



of those killed in sub-unit 1 were probably recorded as being taken from sub-units 4 and 5, accounting for some of the increase in the proportion of the harvest taken from the Wildcat Hills in 1957.

The proportion of the harvest taken from Kimball, Cheyenne and Deuel Counties decreased from 23 percent in 1956 to 16 percent in 1957.

Species Composition of the Harvest: White-tailed deer again comprised a very low proportion of the harvest although the number killed and the proportion of the total harvest increased over that of 1956. For the unit, as open in 1957, three white-tailed deer were killed in 1956 and nine were taken in 1957. The ratio of white-tailed deer to mule deer was 0.75:100.

Sex and age composition of the harvest: Sex and age data, as recorded by temporary check station employees, are given in the following table.

		Mule Deer	White-tailed Deer	Totals
Males	Adult	412	0	412
	Fawn	140	0	140
Females	Adult	481	0	481
	Fawn	110	0	110
Unidentified		59	9	68
TOTALS		1,202	9	1,211

Sex and age ratios for 1957 were 86 adult bucks:100 adult does: 52 fawns as compared to 109:100:66 in 1956. Age data as recorded by the check station operator at Chappell were obviously not correct. Therefore, data from this station were deleted in final tabulations for sex and age. If data recorded by other check station operators were correct, the reproduction rate, as indicated by the doe:fawn ratio, was probably lower in 1957 than in 1956.

The sex ratio of mule deer fawns was essentially the same as for 1956. Of 250 fawns in 1957, 140 were males and 110 were females making a sex ratio of 127 males:100 females. This compares to 125 males:100 females in 1956 for a sample of 464 fawns.

Age composition of the 1957 mule deer harvest, as obtained from a sample by trained game technicians, is summarized and compared to 1956 in the following table.

Age (Yrs.)	Males				Females			
	1954	1955	1956	1957	1954	1955	1956	1957
Fawn	9.4	31.2	28.3	21.6	27.2	25.9	26.6	24.6
1½	51.9	42.0	35.1	49.6	21.9	21.8	27.2	23.8
2½	16.1	11.0	14.0	2.9	16.7	20.1	17.3	7.7
3½	11.9	9.5	11.1	12.2	15.1	15.8	10.6	17.7
4½	6.1	3.3	6.2	10.8	8.8	9.7	7.1	13.8
5½	2.6	1.1	4.0	0.7	5.3	2.1	4.4	4.6
6½	1.2	0.9	1.1	1.4	2.1	2.1	2.1	0.8
7½ & 7½ plus	0.9	0.9	0.2	0.7	2.7	2.5	4.8	6.9
TOTAL AGED	664	545	912	139	191	528	774	130

Note: Each age class expressed as a percentage of the total aged.

Age data obtained by technicians indicated that fawns and yearlings comprised about 71 percent of the buck kill. This represents an increase over 1956 when 63 percent were fawns and yearlings but is on a par with 1955 with 73 percent. For does, the trend in the proportion made up of fawns and yearlings was opposite. In 1957, 48.7 percent of the sample were yearlings and fawns as compared to 53.8 percent in 1956 and 57.7 percent in 1955. The proportion in the 2½-year age class for both bucks and does was lower than would be expected.

Plains Management Unit:

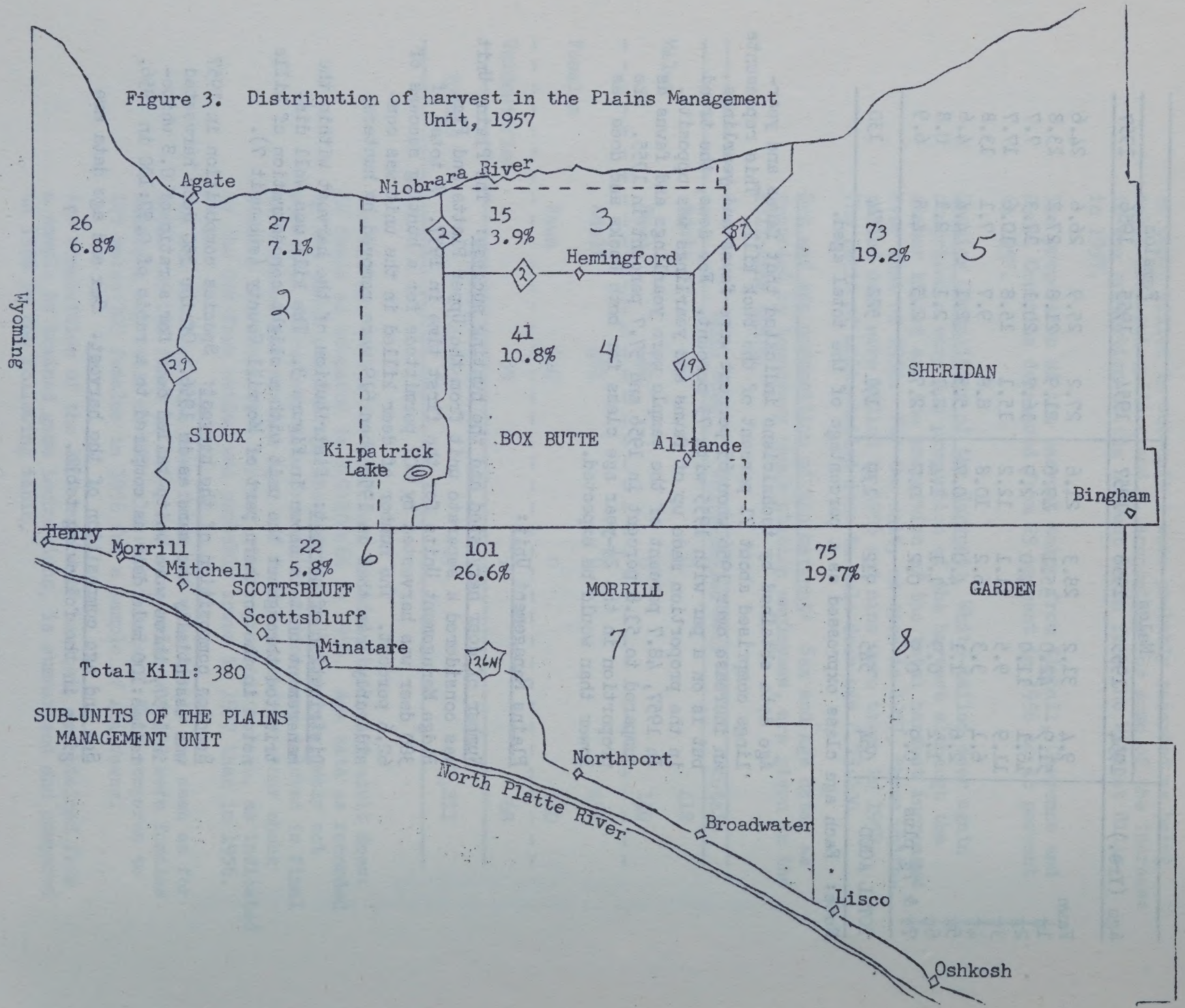
Number of deer harvested and the hunting success: The Plains Unit was considered a separate unit from the Upper Platte and Pine Ridge Management Units for the first time in 1957. A total of 380 deer was harvested by 607 permittees for a hunting success of 62.6 percent. The number of deer killed in the unit was considerably less than in 1956 when 619 were removed by hunters.

Distribution of harvest: Distribution of the harvest within the management unit is shown in Figure 3. The kill was well distributed throughout the unit with a slight concentration of kills noted in the northern part of Morrill County (sub-unit 7).

Species composition of the harvest: Species composition in 1957 was essentially the same as in 1956. Of the 380 deer harvested in 1957, three were white-tailed deer for a ratio of 0.8 white-tailes:100 mule deer as compared to a ratio of 0.97:100 in 1956.

Sex and age composition of the harvest: Sex and age data are given in the following table.

Figure 3. Distribution of harvest in the Plains Management Unit, 1957



		Mule Deer	White-tailed Deer	Totals
Males	Adult	156	0	156
	Fawn	48	0	48
Females	Adult	132	0	132
	Fawn	28	0	28
Unidentified		13	3	16
TOTALS		377	3	380

Sex and age ratios of harvested mule deer were 118 adult males: 100 adult females:57 fawns.

Fawn sex ratios heavily favored males. For a sample of 76 fawns, the ratio was 171 males:100 females.

Age composition of the harvest is presented in the following table.

		Age-Years								
Sex		fawn	1½	2½	3½	4½	5½	6½	7½ & 7½ plus	Totals
Males	No.	14	41	13	11	2		2	3	86
	%	16.3	47.7	15.1	12.8	2.3		2.3	3.5	100
Females	No.	13	23	18		3	3	1		61
	%	21.3	37.7	29.5		4.9	4.9	1.6		99.9
Combined	No.	27	64	31	11	5	3	3	3	147
	%	18.4	43.5	21.1	7.5	3.4	2.0	2.0	2.0	99.9

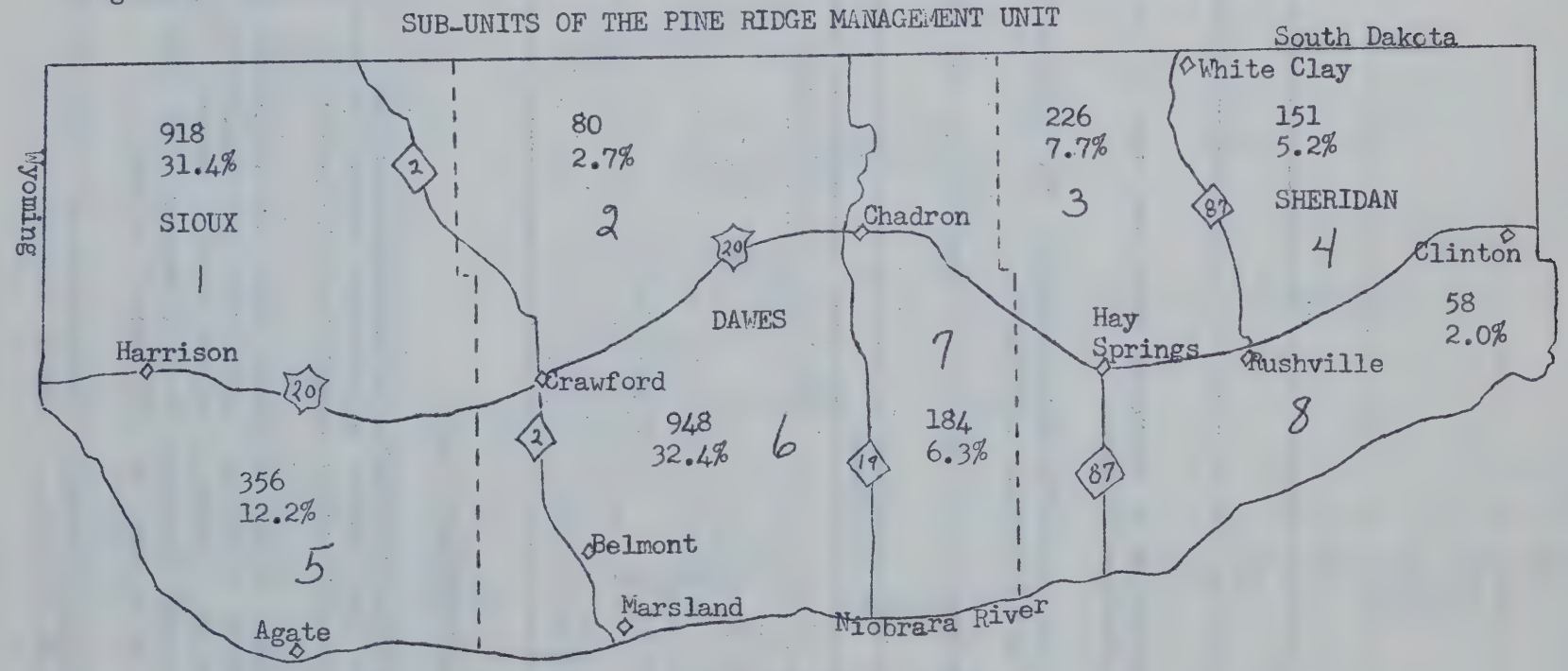
Pine Ridge Management Unit:

Number of deer harvested and the hunting success: The total harvest for the October and November seasons combined was 4,816 deer. Over-all hunting success was 69.4 percent.

Hunters going afield in October were more successful than those in November. In October, 2,921 deer were killed by 3,748 permittees for a hunting success of 78.0 percent. In November, hunting success decreased to 59.4 percent with 1,895 deer harvested by a total of 3,195 permit holders.

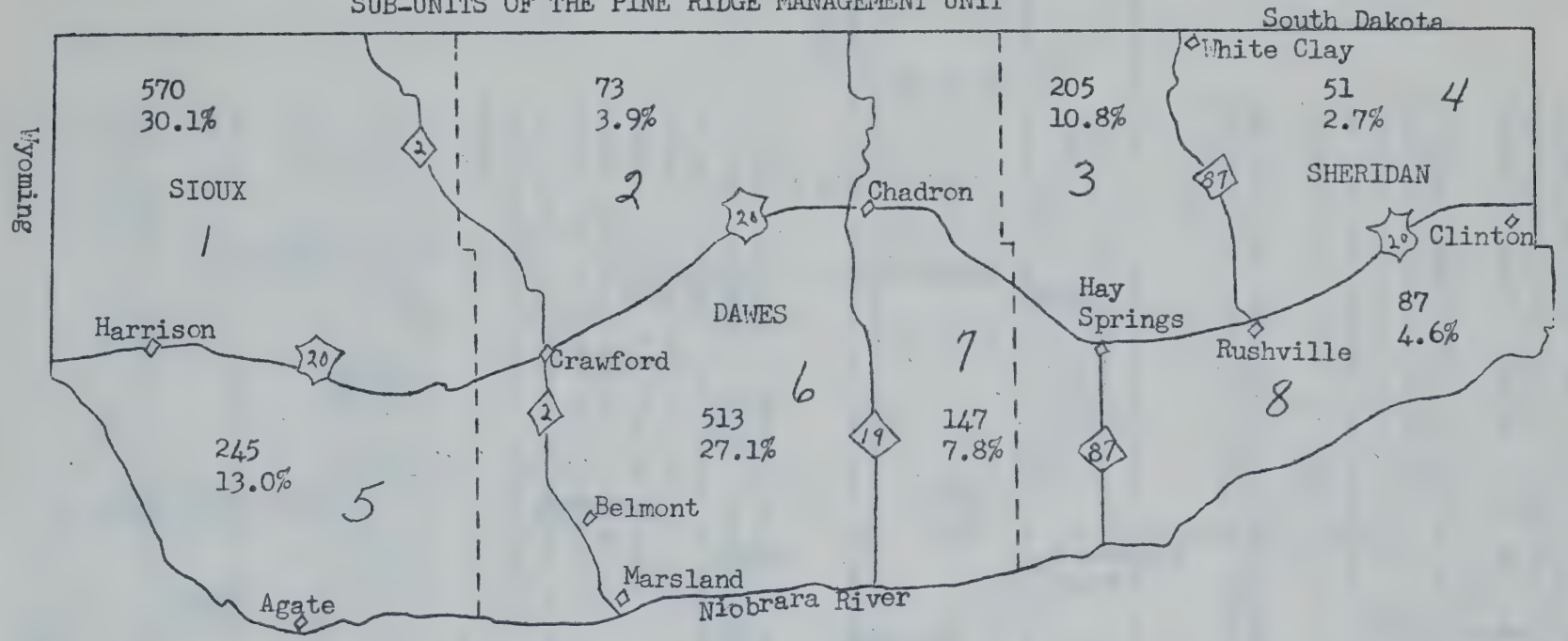
Distribution of harvest: Distribution of kills within this unit are shown in Figures 4, 5 and 6.

Figure 4. Distribution of harvest in the Pine Ridge Management Unit during October, 1957



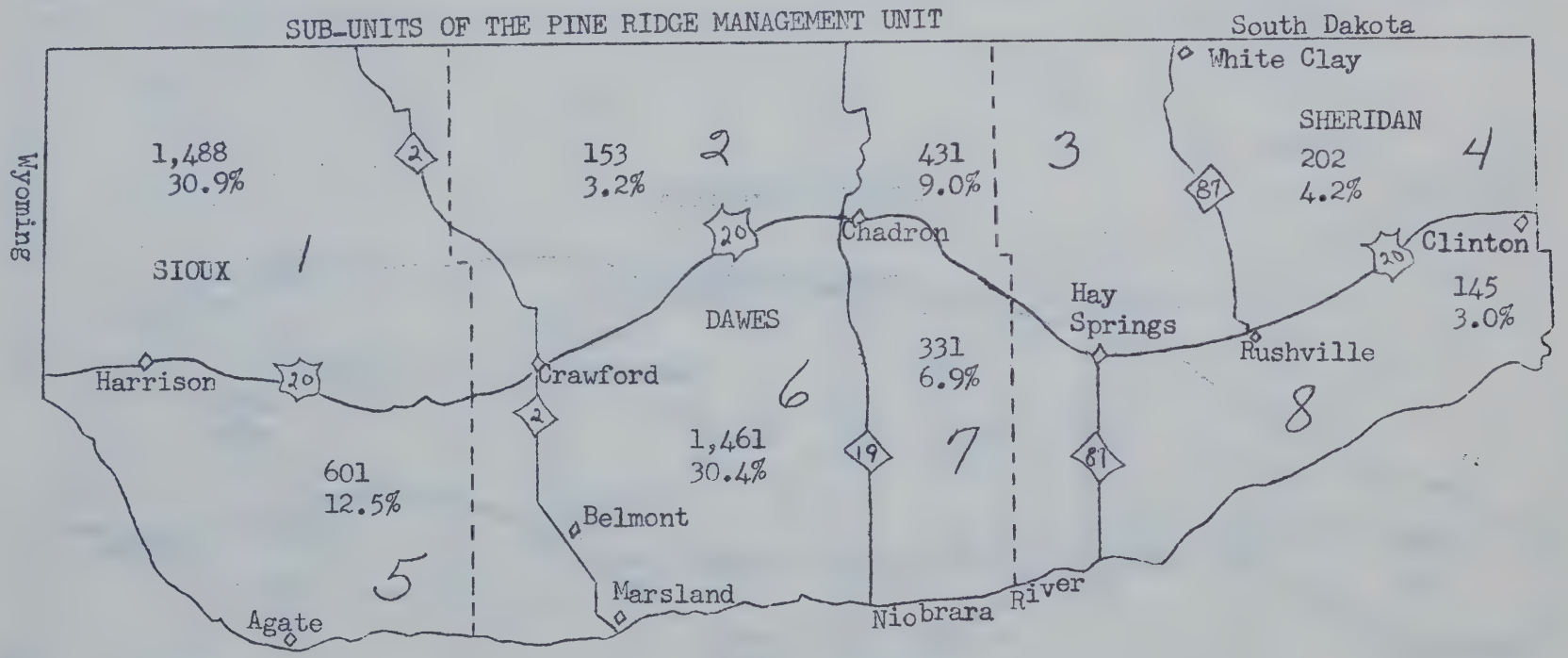
Total Kill: 2,921

Figure 5. Distribution of harvest in the Pine Ridge Management Unit during November, 1957



Total Kill: 1,898

Figure 6. Distribution of harvest in the Pine Ridge Management Unit (October and November seasons combined)



Total Kill: 4,812

Distribution of kills was essentially the same for both the October and November seasons. The pattern was also quite similar to that recorded for 1956. Sub-units 4, 5 and 6 supported the majority of the kills. Combining the harvest for each season, these sub-units yielded 73.8 percent of the total kill.

Species composition of the harvest: The ratio of white-tailed deer to mule deer in the harvest for October was 0.84:100. In November the ratio was 1.06:100. The over-all species ratio for the two seasons combined was 0.92:100, representing a decrease from that of 1956 when the ratio was 2.6:100.

Sex and age composition of the harvest: Sex and age data, as recorded by temporary check station employees, are shown in the following table.

	Mule Deer				White-tailed Deer			
	Male		Female		Male		Female	
Season	Fawn	Adult	Fawn	Adult	Fawn	Adult	Fawn	Adult
October	390	877	342	1,246	2	10	11	3
November	296	518	280	760	2	7	5	6
Combined	686	1,395	622	2,006	4	17	16	9

* 42 unidentified mule deer in October and 21 in November were not included in the table.

Sex and age ratios for the mule deer harvested in October were 70 adult males:100 adult females:59 fawns as compared to 68:100:76 during November. Adult sex ratios were about the same for both seasons. However, the ratio of does:fawns changed considerably. Hunters during the October season took proportionately fewer fawns than in November, indicating a preference or hunter selectivity for larger, mature animals. As deer became more difficult to locate, hunters apparently resorted to taking those available, resulting in a higher proportion of fawns taken during the second season.

The over-all mule deer sex and age ratios for the two seasons combined were 70 adult males:100 females:65 fawns. Doe:fawn ratios indicate that productivity was probably lower in 1957 than in 1956. In 1956 the doe:fawn ratio was 100:77 as compared to 100:65 in 1957.

The sex ratio of fawns for the two seasons combined was 110 males: 100 females.

Age composition of the 1957 mule deer harvest is given in the following tables.

Season		MALES								
		Fawn	1½	2½	3½	4½	5½	6½	7½ & 7½+	Total
October	No.	163	150	29	35	11	7		6	401
	%	40.7	37.5	7.2	8.7	2.7	1.7		1.7	
November	No.	44	37	16	8	5		1		111
	%	39.6	33.3	14.4	7.2	4.5		0.9		
Combined	No.	207	187	45	43	16	7	1	6	512
	%	40.5	36.6	8.8	8.4	3.1	1.4	0.2	1.2	

Season		FEMALES								
		Fawn	1½	2½	3½	4½	5½	6½	7½ & 7½+	Total
October	No.	132	109	78	65	39	30	24	28	505
	%	26.2	21.6	15.4	12.9	7.7	5.9	4.8	5.6	
November	No.	50	13	15	16	13	8	6	6	127
	%	39.4	10.2	11.8	12.6	11.2	6.3	4.7	4.7	
Combined	No.	182	122	93	81	52	38	30	34	632
	%	28.8	19.3	14.7	12.8	8.2	6.0	4.7	5.4	

Compared to 1956, the proportion of fawns in the sample increased while the proportion of yearlings decreased for both males and females. Interpretation of age data is difficult, however, since there appears to be a systematic bias weighting the data in favor of fawns. When comparing doe:fawn ratios of deer aged by technicians to those aged by temporary check station personnel, it is obvious that a bias occurred in one or the other series of data. The doe:fawn ratio for animals aged by technicians was 100:86 as compared to 100:65 for other check station personnel. This was probably a systematic bias resulting from emphasis placed on fawns and yearlings for obtaining other biological data. In addition to this type bias, it appears that another bias occurred in age data for males that would again tend to weight data in favor of fawns and yearlings. Proportionately, more fawns and yearlings were aged than were older trophy deer. In several instances, older bucks were noted merely as adults and, consequently, were not used in final tabulations for age composition.

There was an apparent decrease in the proportion of yearlings in the sample during November as compared to October. Apparently this was not affected by the biases as discussed and may represent a greater vulnerability of yearlings to the gun, resulting in a higher porportion being taken during the first season.

Sandhills Management Unit:

Number of deer harvested and the hunting success: Hunting success in the Sandhills Management Unit was the highest recorded for any management unit during 1957. A total of 1,783 permits was issued for this unit and 1,487 deer were killed for a hunting success of 83.4 percent. This represents a slight increase over the hunting success of 1956 when 80.5 percent of the hunters were successful in getting their deer. However, hunters in 1956 were restricted to bucks for the first four days of hunting and were allowed to harvest either sex only on the last day of the open season.

Distribution of harvest: Distribution of the 1957 harvest is shown in the following table.

County	No. of Deer Harvested			Percent of Total Harvested
	Mule Deer	White-tailed Deer	Total	
Cherry	696	43	739	49.7
Brown	341	4	345	23.2
Keya Paha	237	23	260	17.5
Rock	110	5	115	7.7
Hooker	27	0	27	1.8
Grant	1	0	1	0.1
TOTALS	1,412	75	1,487	100.0

Although, in total numbers, Cherry County supported the greatest kill, the highest density of kills was in Keya Paha County with 0.34 deer harvested per square mile. The density of kills in Cherry and Rock Counties was about the same with 0.12 and 0.11 deer killed per square mile in each county respectively. Brown County had the lowest density of kills with 0.09 killed per square mile.

Species composition of the harvest: Species composition of the harvest was essentially the same as for 1956. In 1957, 5.1 percent of the harvest were white-tailed deer as compared to 5.7 percent in 1956 and 10.4 percent in 1955. (The ratio of white-tailed deer to mule deer was 5.3:100 in 1957 and 6.05:100 in 1956).

The highest proportion of whitetails within any sub-management unit was in Keya Paha County where 8.8 percent of the harvest were white-tailed deer. The proportion of whitetails in the harvest of other sub-management units was as follows: Cherry County, 5.8 percent; Rock County, 4.4 percent; and Brown County, 1.2 percent.

Sex and age composition of the harvest: Sex and age data are shown in the following table.

		Mule Deer	White-tailed Deer	Totals
Males	Adult	450	32	482
	Fawn	144	11	155
Females	Adult	564	14	578
	Fawn	129	18	147
Unidentified		125	0	125
TOTALS		1,412	75	1,487

Sex and age ratios of mule deer were 80 adult males:100 adult females:48 fawns. Reliability of age data, as recorded by temporary check station personnel, is unknown. It was not possible for technicians to work closely with all personnel and it is known that check station operators at Cody and Springview recorded some fawns as adults. Data were discarded for those days in which check station personnel were known to be aging incorrectly. However, others may also have made errors that did not come to our attention. If so, the proportion of fawns, as recorded, is probably too low.

The sex ratio of 269 mule deer fawns was 112 males:100 females.

Sex and age ratios for white-tailed deer were 228 adult males: 100 females:207 fawns. The fawn sex ratio was 61 males:100 females.

Age data as obtained by technicians are presented in the following table and compared to those of 1955 and 1956.

	Males			Females	
Age Class	1955(1)	1956(2)	1957	1956	1957
Fawns		13.2	38.6	26.8	31.0
1½	42.1	45.2	39.1	18.0	21.0
2½	22.6	13.0	8.9	20.0	25.8
3½	14.3	12.2	4.0	13.4	8.4
4½	10.4	6.4	4.5	5.7	3.7
5½	5.2	5.0	3.5	5.2	2.6
6½	3.6	1.2	1.0	3.6	4.7
7½ & 7½ plus	1.9	3.9	0.5	7.2	2.7
Total Aged	385	485	202	194	190

(1) Hunters allowed to harvest bucks only during 1955.
(2) In 1956, hunters were restricted to bucks for the first four days but were allowed to harvest either sex on the last day.

Note: Each age class expressed as percentage of the total aged.

Upper Missouri Management Unit:

Number of deer harvested and the hunting success: Hunting success in 1957 was about the same as in 1956. Of 495 permittees, 189 were able to bag their buck making a hunting success of 38.2 percent as compared to a success rate of 37.2 percent in 1956.

Distribution of harvest: Distribution of the 1957 harvest is shown in the following table. Distribution of kills was essentially the same as in 1956.

County	No. of Deer Harvested			Percent of Total Harvested
	Mule Deer	White-tailed Deer	Total	
Holt	49	22	71	37.5
Knox	32	15	47	24.9
Boyd	17	14	31	16.4
Dixon	0	17	17	9.0
Dakota	0	17	17	9.0
Cedar	1	5	6	3.2
TOTALS	99	90	189	100.0

Species composition of the harvest: The proportion of white-tailed deer in the harvest again declined from that of previous years, marking the fourth consecutive year that such a decline has been noted. The proportion of whitetails in the harvest for each year the unit has been opened to hunting was as follows: 1953, 91 percent; 1954, 78.5 percent; 1955, 58.5 percent; 1956, 53.5 percent; and 1957, 47.6 percent. Since white-tailed deer are slightly more prolific than mule deer and usually considered warier, this is the opposite trend from that one would suspect. Mortality of whitetailed deer, possibly caused by disease, has been suggested in previous reports as a possible factor causing the change in species composition.

Distribution of species within the unit was essentially the same as in past years. Only one mule deer was killed east of Knox County.

Sex and age composition of harvest: Hunters were restricted to bucks having a fork on at least one antler. A technician was able to work the unit for only one day. He was unable to collect an adequate sample for age composition of the harvest.

Elkhorn Management Unit:

Number of deer harvested and the hunting success: Hunting success was lower for this unit than in any other management unit. Forty-four deer were harvested by 174 permittees for a hunting success of 25.3 percent.

Distribution of harvest: Distribution of the 1957 harvest is shown in the following table.

County	No. of Deer Harvested				Percent of Total Harvested
	Mule Deer	White-tailed Deer	Fallow Deer	Total	
Antelope	19	7	1	27	61.4
Stanton	5	4	0	9	20.4
Madison	0	6	0	6	13.6
Cuming	0	2	0	2	4.5
Pierce	0	0	0	0	0
TOTALS	24	19	1	44	99.9

Distribution of the 1957 harvest was considerably different from that of 1956. The proportion of kills in Antelope County increased from 39.6 percent in 1956 to 61.4 percent in 1957. The proportion in Cuming County decreased from 25.2 percent to 4.5 percent. With so few hunters in the field, a change such as this could result from a shift in hunting pressure.

Pierce County was opened to deer hunting for the first time in 1957. However, no deer were recorded killed within the county.

Species composition of the harvest: The ratio of white-tailed deer:mule deer in the harvest decreased considerably from that of 1956. In 1956, the over-all ratio was 185 whitetails:100 mule deer as compared to 79:100 in 1957.

The proportion of white-tailed deer occurring in the harvest by counties was as follows: Antelope, 25.9 percent; Stanton, 44.4 percent; Madison, 100 percent; and Cuming, 100 percent.

One fallow deer was reported killed in Antelope County. This represents the first record of a fallow deer's being taken by a rifle hunter during an open season in Nebraska.

Sex and age composition of the harvest: Hunters were restricted to bucks having a fork on at least one antler.

A technician worked at the Norfolk check station but the data collected were too limited to use for age composition.

Halsey Management Unit:

Number of deer harvested and the hunting success: Hunters in the Halsey Management Unit again realized a high rate of hunting success, although slightly lower than in 1956 when only Thomas and Blaine Counties (including the Bessey Division of the

Nebraska National Forest) were open. Of 400 permittees, 323 were successful in bagging their deer for a hunting success of 80.7 percent.

Distribution of the harvest: Distribution of the harvest is shown in the following table.

County or sub-unit	No. of Deer Killed			Percent of Total Harvested
	Mule Deer	White-tailed Deer	Total	
Halsey	80	8	88	27.3
Thomas Co.	62	2	64	19.8
Loup Co.	55	6	61	18.9
Blaine Co.	55	0	55	17.0
Garfield Co.	53	2	55	17.0
TOTALS	305	18	323	100.0

The kill was well distributed throughout the management unit. The Bessey Division of the Nebraska National Forest supported the greatest kill with 27.3 percent of the total harvest. The density of kill on the Forest (considering open and timbered area combined) was about 0.63 per square mile. Density of kills (kill per square mile) for other sub-units was as follows: Thomas and Blaine Counties, 0.09; Garfield, 0.10; and Loup, 0.11.

Species composition of the harvest: The ratio of white-tailed deer to mule deer increased but slightly over that of 1956 in Thomas and Blaine Counties. Of 207 deer harvested in these counties in 1957, 10 were white-tailed deer making a species ratio of 4.8 whitetails:100 mule deer as compared to 3.5:100 in 1956.

On the Bessey Division of the Nebraska National Forest, the ratio of whitetails to mule deer increased from 5.4:100 in 1956 to 10:100 in 1957.

Sex and age composition of the harvest: Sex and age composition of the 1957 harvest is shown in the following table.

Sex		No. of Deer Harvested		
		Mule Deer	White-tailed Deer	Totals
Male	Adult	148	11	159
	Fawn	25	0	25
Female	Adult	103	5	108
	Fawn	28	2	30
Unidentified		1	0	1
TOTALS		305	18	323

Sex and age ratios of the 1957 mule deer harvest were 143 adult males:100 adult females:89 fawns. The sex ratio of adults was only slightly less than in 1956 when the ratio was 158 males:100 females. The doe:fawn ratio increased considerably over 1956 when the ratio was 100 does:37 fawns.

Fawn sex ratios again favored females for this unit. The ratio recorded for 53 mule deer fawns was 89 males:100 females.

Age composition, as recorded by technicians at the Halsey check station, is presented in the following table and compared to that of 1956.

	Males		Females	
Age Class	1956	1957	1956	1957
Fawn	9	15.9	23	21.6
1½	40	36.5	15	15.4
2½	23	12.7	16	23.1
3½	13	14.3	18	20.0
4½	4	11.1	15	9.2
5½	4	9.5	7	7.2
6½	6		5	
7½ - 7½ plus	1		2	3.2
TOTAL AGED	78	63	61	65

Note: Each age class expressed as percentage of total aged.

Age composition of the 1957 harvest changed but little from that of 1956. For males, the proportion of fawns increased slightly with a proportionate decrease in yearlings. For females, there again appeared to be a shortage in the 1½-year age class.

All Management Units Combined:

Number of deer harvested and the hunting success: The 1957 deer harvest is summarized in Table 1. The recreational outlet from deer hunting and the number of deer harvested was the greatest in recent history of Nebraska. Of 12,174 permits issued to rifle hunters, 8,450 were successful in bagging deer, making a hunting success of 69.4 percent. The rate of success was on a par with the past eight-year average (1949 through 1956) of 70.8 percent although lower than the exceptionally high success rate of 80.2 percent in 1956.

Table 1. Summary of the 1957 deer harvest by rifle hunters

	MANAGEMENT UNIT								
	Pine Ridge (Oct.)	Pine Ridge (Nov.)	Plains	Upper Platte	Sandhills	Halsey	Upper Missouri	Elkhorn	Total Harvest
Mule deer harvest	2,897	1,875	377	1,202	1,412	305	99	24	8,191
males	1,267	814	204	552	594	173	99	24	3,727
adult	877	518	156	412	450	148	99	24	2,684
fawn	390	296	48	140	144	25			1,043
females	1,588	1,040	160	591	693	131			4,203
adult	1,246	760	132	431	564	103			3,286
fawn	342	280	28	110	129	28			917
unidentified	42	21	13	59	125	1			261
Whitetail harvest	24	20	3	9	75	18	90	19	258
males	10	9			43	11	90	19	182
adult	8	7			32	11	90	19	167
fawn	2	2			11				15
females	14	11			32	7			64
adult	11	6			14	5			36
fawn	3	5			18	2			28
unidentified			3	9					12
Total harvest	2,921	1,895	380	1,211	1,487	323	189	43(1)	8,450
Number permits issued	3,748	3,195	607	1,772	1,783	400	495	174	12,174
Hunting success (%)	78.0	59.4	62.6	67.3	83.4	80.7	38.2	25.3	69.4
Bucks:Does:Fawns (Mule deer)	70:100:59	68:100:76	118:100:57	86:100:52	80:100:48	144:100:51			(2)78:100:60
Mule deer fawn sex ratio (bucks:does)	114:100	106:100	171:100	127:100	112:100	89:100			114:100
Whitetails:Mule deer	0.83:100	1.06:100	0.79:100	0.75:100	5.3:100	5.9:100	91:100	79:100	3.15:100

(1) One fallow deer taken in Antelope County making a total kill of 44.
(2) Includes only those animals taken in management units open to either-sex hunting.

Species composition and distribution: As in past years, white-tailed deer comprised only a small portion of the harvest. Of the 8,450 killed, only 258, or 3.5 percent, were whitetails.

The proportion of white-tailed deer in the harvest decreased slightly from that of 1956. In 1956, the proportion of whitetails was 5.24 percent as compared to 3.5 in 1957.

Sex and age composition of harvest: The over-all sex and age ratios of the mule deer harvest were 82 adult males:100 adult females:60 fawns. For those areas open to either-sex hunting, the buck:doe ratio was 78:100.

Since a large proportion of the white-tailed deer were taken in the Upper Missouri and Elkhorn Management units, where hunters were restricted to bucks, the adult buck:doe ratio heavily favored males. Of 231 identified as adults, 167 were males and 64 were females making a buck:doe ratio of 261:100. For those areas open to either-sex hunting, the buck:doe:fawn ratios were 161:100:119.

The state-wide sex ratio of mule deer fawns favored males. Of 1,960 recorded as fawns, 1,043 were males and 917 were females, making a sex ratio of 114 males:100 females.

The sex ratio of 43 whitetail fawns (15 males and 38 females) was 54 males:100 females.

Day of Kills

The number and proportion of deer killed for each day of the season in each management unit are given in Tables 2, 3 and 4.

The pattern of daily kill throughout the season followed about the same trend as in past seasons. For areas open to either-sex hunting, the major portion of the harvest was taken during the first two days.

Although hunters were allowed five more days to hunt in the Pine Ridge Management Unit during the October season of 1957 than in 1956, the proportions of the harvest taken during the first three days were quite similar for the two years. For the October season in 1957, 65.8 percent of the harvest was taken by the close of the second day as compared to 71.1 percent in 1956. By the end of the third day, 81.5 percent of the total kill was complete as compared to 84.1 in 1956. The highest kill again occurred on the first day, although lower than in 1956.

For the November season in the Pine Ridge (second season), a lower proportion of the kill was taken during the first three days as compared to the October season. The proportion killed on the first day was only 18.4 percent but by the close of the second day, 63.4 percent of the harvest was completed.

Table 2. Day of kill in the Pine Ridge Management Unit
(Either-sex season)

Season		Day of Kill 1	2	3	4	5	6	7	8	9	10	11	Totals
Oct. 4-13	No. Killed	1077	842	457	85	117	86	55	41	80	77		2917
	Percent	36.9	28.9	15.7	2.9	4.0	2.9	1.9	1.4	2.7	2.6		99.9
Nov. 1-11	No. Killed	344	516	341	169	90	59	45	52	112	110	57	1895
	Percent	18.2	27.2	18.0	8.9	4.7	3.1	2.4	2.7	5.9	5.8	3.0	99.9

Table 3. Day of kill in the Plains, Upper Platte, Sandhills and Halscy Management Units
(Either-sex season)

Management Unit		November 1	2	3	4	5	Totals
Plains	No. Killed	102	104	80	58	42	386
	Percent	26.4	27.0	20.7	15.0	10.9	100.0
Upper Platte	No. Killed	426	337	197	142	117	1219
	Percent	34.9	27.7	16.3	11.6	9.6	100.1
Sandhills	No. Killed	535	406	327	145	74	1487
	Percent	35.9	27.3	22.0	9.8	5.0	100.0
Halsey	No. Killed	113	80	64	32	37	326
	Percent	34.7	24.5	19.6	9.8	11.3	99.9
TOTALS	No. Killed	1,176	927	668	377	270	3,418
	Percent	34.4	27.1	19.5	11.0	7.9	99.9

Table 4. Day of kill in the Upper Missouri and Elkhorn Management Units
(Buck-only season)

Management Unit		November 1	2	3	4	5	Totals
Upper Missouri	No. Killed	31	36	38	36	48	189
	Percent	16.4	19.0	20.1	19.0	25.4	99.9
Elkhorn	No. Killed	16	8	5	7	8	44
	Percent	36.4	18.2	11.4	15.9	18.2	100.1
TOTALS	No. Killed	47	44	43	43	56	233
	Percent	20.2	18.9	18.4	18.4	24.0	99.9

For those units open to either-sex hunting for only five days, the proportions of the kill taken during the first three days were essentially the same as for the October season in the Pine Ridge Management Unit, although hunters in the Pine Ridge were allowed five more days in which to hunt. Combining the kills for the Upper Platte, Plains, Sandhills and Halsey Management Units, 34.4 percent were taken on the first day as compared to 36.9 percent in the Pine Ridge. By the end of the second day, 61.5 percent of the harvest was complete, and by the close of the third day, 81.0 percent as compared to 65.8 and 81.5 percent respectively for the Pine Ridge. These data again point out that practically all the hunting pressure and most of the harvest are concentrated during the first three days of a season under either-sex regulations, regardless of the length of season.

Kills in the Upper Missouri and Elkhorn Management Units, where hunters were restricted to bucks having a fork on at least one antler, were well distributed throughout the season.

Physical Characteristics and Physical Condition of Deer Harvested in 1957

Hog-dressed weights:

Mean hog-dressed weights of mule deer harvested during 1957 are presented and compared to those of 1955 and 1956 in Table 5.

Mean hog-dressed weights of yearling mule deer males increased in all management units over those of 1955 and 1956. The increase in mean weight varied from 4.1 pounds for the October season in the Pine Ridge unit to 8.9 pounds in the Halsey unit. The average increase of 154 yearling males (including all management units) killed in November was 8.2 pounds greater than the grand average for 1956 when deer were killed in December.

Although mean weights of older age classes were not tabulated, several bucks were killed that exceeded 250 pounds hog-dressed and bucks exceeding 200 pounds were not uncommon. Nebraska weight records for both mule deer and white-tailed deer were broken in 1957. A white-tailed buck was killed northeast of Valentine that hog-dressed 289 pounds. A mule deer buck was taken in Garden County (Plains Management Unit) that hog-dressed 310 pounds.

These increased weights may be a reflection of two factors: (1) greater precipitation in 1957, resulting in a better growing season and, consequently, better summer deer range; and (2) the time of the season as compared to those of 1955 and 1956. Of the two, the latter is believed to have been the most pronounced.

Table 5. Mean weights of mule deer harvested in 1955, 1956 and 1957. (Harvest occurred during October and November in 1957 and in December for 1955 and 1956)

MANAGEMENT UNIT	YEAR	MALES								FEMALES							
		Fawn				1½				Fawn				1½			
		No.	Range	Mean	sd.	No.	Range	Mean	sd.	No.	Range	Mean	sd.	No.	Range	Mean	sd.
Pine Ridge	1955	129	39-79	61.6		197	57-131	102.0		105	36-86	58.6		123	75-118	92.7	
	1956	195	35-90	55.7		275	68-142	101.1		172	26-91	52.1		145	64-112	89.9	
	(Oct)1957	102	36-69	53.0	6.2	109	72-142	105.2	11.7	84	33-60	48.1	5.7	72	74-123	89.7	8.9
	(Nov)1957	13	48-73	56.5	7.0	6	91-123	108.0	11.5	18	39-66	52.7	6.5				
Plains	1957					7	87-129	111.0	14.8								
Upper Platte	1955	114	42-85	64.2		175	58-142	104.4		92	37-98	60.0		95	56-114	93.5	
	1956	148	33-87	65.7		179	72-139	106.3		131	25-78	59.6		136	70-118	95.1	
	1957	19	49-75	62.5	7.1	55	89-136	111.0	9.8	21	43-72	59.8	7.8	21	76-127	94.3	10.1
Sandhills	1955					107	86-137	104.4									
	1956	27	51-78	63.3		89	85-145	105.9		21	33-73	56.8		16	76-104	90.8	
	1957	72	51-78	63.0	6.7	63	93-138	114.0	10.5	54	41-81	57.0	7.7	31	80-128	97.7	7.8
Halsey	1956	5	53-65	59.8		26	72-133	98.8		14	32-66	52.3		9	81-93	86.3	
	1957	7	47-66	57.7	6.3	23	93-128	107.7	8.2	11	46-80	59.8	9.0	9	79-104	93.4	5.7
Average	(Dec)1955	243	39-85	62.8		479	57-142	103.4		197	36-98	59.2		218	56-118	93.1	
	(Dec)1956	375	33-90	60.3		569	68-145	103.4		338	25-91	55.4		306	64-118	92.2	
	(Oct)1957	102	36-69	53.0		109	72-142	105.2		84	33-60	48.1		72	74-123	89.7	
	(Nov)1957	111	47-78	61.9		154	87-138	111.6		104	39-81	57.1		61	76-128	95.9	

Previous to 1957, the season was open during December while the deer were rutting. In 1957, the season was open in October for the Pine Ridge unit and during the first part of November for other management units and the second season in the Pine Ridge, previous to or at the beginning of rutting activities.

Investigators in Pennsylvania, working with penned white-tailed males, have observed weight losses occurring in bucks during the rutting season.(1) Their observations revealed that with the onset of rutting season consumption of food by penned white-tailed males decreased and activity increased. These weight losses and changes in activity were more pronounced in the larger, more vigorous deer.

Although no weight data were taken or tabulated for bucks older than yearlings in 1957, it is likely that mean hog-dressed weight gains over past years would have been even more pronounced in older males. This is in part evidenced by the relatively large number of bucks killed that exceeded 200 pounds hog-dressed weight.

Mean hog-dressed weights of yearling mule deer females were about the same as in 1956 for the Pine Ridge and Upper Platte Management Units. However, for the Sandhills and Halsey units, mean weights increased 6.9 and 7.1 pounds respectively. The increase for all management units combined was 3.7 pounds. These increased weights in females may again be a reflection of the better growing season in 1957.

As could be expected, weights of fawns taken in the Pine Ridge unit during October were lower than those taken in December of 1955 and 1956. However, hog-dressed weights of fawns taken during November equaled or exceeded the weights of fawns taken in December of 1955 and 1956.

The greatest mean hog-dressed weights for yearling mule deer in 1957 were in the Sandhills Management Unit. The lowest mean weights were recorded for the Pine Ridge Management Unit.

When compared to mean weights of other management units, yearling deer taken from the Halsey Management Unit showed considerable improvement in physical characteristics and condition over past years in which data were taken. For the first time, mean hog-dressed weights of yearling mule deer taken from this area compared well with yearlings taken in other management units of the state.

---

(1) 1956. French, C. E., et.al. Nutrient requirements for growth and antler development in the white-tailed deer. Jour. Wildlife Mgt. Vol. 20(3): pp. 221-232.

Antler measurements:

Mean antler measurements for male mule deer in the 1½-year age class are summarized and compared to those of 1956 in Table 6.

The mean antler circumference for yearling mule deer males was essentially the same as that recorded for 1956. In 1957, the mean of 201 measurements (all units combined) was 2.60 inches as compared to 2.58 inches in 1956 from a sample of 346 measurements.

The only management unit in which mean antler circumference showed significant variation from the mean of 1956 was in the Sandhills unit. In this unit the mean increased from 2.62 inches in 1956 to 2.85 inches in 1957.

The mean length of antler in yearling mule deer males decreased from 11.5 inches in 1956 to 10.8 inches in 1957. Mean number of points remained essentially the same as in 1956.

Mean length of tarsus:

Data pertaining to length of tarsus for mule deer fawns and yearlings are summarized and compared to those of 1956 in Table 7.

The mean lengths of tarsus for fawns taken in November of 1957 for both males and females were less than those recorded for fawns taken in December of 1956. In 1956, the mean for 211 measurements on male mule deer fawns was 16.91 inches as compared to 16.54 inches for a sample of 98 in 1957. For females the mean of 187 measurements in 1956 was 16.52 inches as compared to 16.20 inches in 1957.

The mean for fawns killed in November of 1956 was significantly greater than those killed during October. The mean for 112 male fawns taken in October was 15.99 inches as compared to 16.54 inches for those taken in November. For females the mean increased from 15.61 inches in October to 16.20 inches in November.

The over-all averages for yearling mule deer taken in November of 1957 did not vary significantly from those recorded in 1956.

Summary: The 1957 deer season was the ninth consecutive open season in western Nebraska and the fifth consecutive season in north-central and northeastern Nebraska. Counties open to deer hunting for the first time in recent history included Loup, Garfield and Pierce Counties.

Data for the 1957 deer harvest were again collected by checking all deer killed at publicized check stations.

Table 6. Antler measurements of 1½ year old mule deer harvested in 1957 as compared to those harvested in 1956

Management Unit	Year	MEASUREMENT										
		Antler Circumference				Antler Length				Points		
		No.	Range	Mean	sd.	No.	Range	Mean	sd.	No.	Range	Mean
Pine Ridge (Oct.)	1956	121	1 1/8-3 1/2	2.49	0.42	111	7- - -16 1/2	11.3	2.0	154	1-4	2.0
	1957	97	1 1/2-3 7/8	2.54	0.40	92	6 1/2-14 1/2	10.5	1.8	89	1-3	2.03
Upper Platte	1956	152	1 5/8-3 3/4	2.64	0.39	139	7- - -15 1/2	11.7	1.8	138	1-4	2.08
	1957	39	2- - -3 1/4	2.58	0.27	37	7- - -14	10.8	1.4	51	1-3	2.02
Sandhills	1956	57	2- - -3 1/2	2.62	0.35	45	8 1/2-15	11.4	1.5	63	1-3	2.19
	1957	47	2 1/4-3 1/2	2.85	0.32	48	6 1/2-15	11.5	1.6	50	1-4	2.20
Halsey	1956	16	2- - -2 7/8	2.51	0.24	12	7 1/2-15	11.4	2.2	21	1-3	1.90
	1957	18	1 3/4-3 3/4	2.40	0.33	18	7- - -14	10.6	1.8	27	1-4	2.15
AVERAGE	1956	346	1 1/8-3 3/4	2.58		307	7- - -16 1/2	11.5		376	1-4	2.05
	1957	201	1 3/4-3 7/8	2.60		195	6 1/2-14 1/2	10.8		217	1-4	2.08

Table 7. Mean length of tarsus for mule deer harvested in 1957 as compared to those harvested in 1956

Management Unit	Year	MALES							
		FAWN				YEARLING			
		No.	Range	Mean	sd.	No.	Range	Mean	sd.
Pine Ridge	1956	113	15 1/2-18 1/2	16.70	0.56	115	16 3/4-20 1/2	19.00	0.62
	(Oct)1957	112	14 - - 18 1/2	15.99	0.61	102	17 1/2-19 3/4	18.73	0.54
	(Nov)1957	13	15 1/2-17 1/4	16.48	0.48				
Upper Platte	1956	91	14 3/4-19 3/4	17.13	0.76	143	17 1/2-21	19.14	0.60
	1957	18	14 3/4-17 1/2	16.42	0.66	47	17 - - 20	18.93	0.54
Sandhills	1956	7	16 1/4-17 1/2	16.90		32	18 1/4-20 1/4	19.06	0.56
	1957	67	15 - - 18	16.57	0.53	59	17 1/2-20 1/2	19.27	0.55
Plains	1957					7	17 3/4-19 3/4	18.68	
Average	1956	211	14 3/4-19 3/4	16.91		290	16 3/4- 21	19.05	
	(Oct)1957	112	14 - - 18 1/2	15.99	10	102	17 1/2-19 3/4	18.73	
	(Nov)1957	98	14 3/4-18	16.54		113	17 - - 20 1/2	19.10	
		FEMALES							
Pine Ridge	1956	86	14 1/2-17	16.24	0.64	74	17 - - 19 1/2	18.43	0.58
	(Oct)1957	83	14 1/2-17	15.61	0.49	65	17 - - 19	18.09	0.49
	(Nov)1957	22	15 - - 17	16.10	0.52				
Upper Platte	1956	93	15 - - 18 3/4	16.80	0.76	72	17 1/4-20 1/2	18.57	0.62
	1957	24	15 - - 17 1/4	16.20	0.56	20	17 - - 19	18.31	0.56
Sandhills	1956	8	16 1/2-17 3/4	16.75		6	17 3/4-18 1/2	18.17	
	1957	54	15 - - 18	16.25	0.65	31	17 1/4-19 1/2	18.47	0.60
Plains	1957	-	-	-	-	-	-	-	-
Average	1956	187	14 1/2-18 3/4	16.52		152	17 - - 20 1/2	18.48	
	(Oct)1957	83	14 1/2-17	15.61		65	17 - - 19	18.09	
	(Nov)1957	100	15 - - 18	16.20		51	17 - - 19 1/2	18.39	

Of 12,174 permittees, 8,450 bagged deer making an over-all hunter success of 69.4 percent. The highest success (83.4 percent) was in the Sandhills Management Unit; the lowest success (25.3 percent) was in the Elkhorn Managenent Unit where hunters were restricted to bucks having a fork on at least one antler.

Distribution of the harvest within each management unit was presented.

The ratios of white-tailed deer to mule deer in the harvest for each management unit were as follows: Upper Platte, 0.75:100; Plains, 0.79:100; Pine Ridge, 0.92:100; Sandhills, 5.3:100; Halsey, 5.9:100; Upper Missouri, 91:100; and the Elkhorn, 79:100. The proportion of white-tailed deer in the total 1957 harvest was lower than in 1956, decreasing from 5.24 percent in 1956 to 3.5 percent in 1957.

The proportion of white-tailed deer in the 1957 harvest for the Upper Missouri and Elkhorn Management Units again decreased from that of previous years. In the Elkhorn unit the change could have been the result of a shift in hunting pressure. For the Upper Missouri, mortality of white-tailed deer was again suggested as a possible cause for the change in species composition.

The over-all buck:doe:fawn ratios for units open to either-sex hunting were 78:100:60 as compared to 107:100:72 in 1956.

Sex ratios of mule deer fawns, as in past years, favored males. The over-all sex ratio was 114 males:100 females for a sample of 1,960. Sex ratios (males:females) of mule deer fawns by units were as follows: Upper Platte, 127:100; Plains, 171:100; Pine Ridge, 110:100; Sandhills, 112:100; and Halsey, 89:100.

Age data, as recorded by game technicians, were presented and compared to past years.

The pattern of daily kill throughout the season followed about the same trend as in past seasons for each management unit. For areas open to either-sex hunting, the major portion of the harvest was taken during the first two days, regardless of the length of season. Kills in the Upper Missouri and Elkhorn Management Units, where hunters were restricted to bucks having a fork on at least one antler, were well distributed throughout the season.

The general physical condition of mule deer in the harvest was considerably better than in 1955 and 1956. Mean hog-dressed weights of yearling mule deer males increased in all management units, varying from 4.1 pounds for the October season in the Pine Ridge to 8.9 pounds in the Halsey unit. The average increase (including all management units) of yearling males

killed in November was 8.2 pounds greater than the grand average for 1956 when deer were killed in December. A similar increase of 3.7 pounds was noted for the over-all mean hog-dressed weight of yearling females. However, yearling females in the Pine Ridge Management unit averaged less than in 1956. These increased weights were attributed to two factors: (1) a better growing season in 1957 resulting in better summer range; and (2) harvesting of deer during October and November, prior to or at the beginning of the rut, as opposed to a harvest in December during or after the rut. Of the two, the latter is believed to have had the greatest influence.

Mean weights of fawns harvested in October were less than those killed in December of 1956 and 1955. However, mean hog-dressed weights of those harvested in November equaled or exceeded those taken in 1955 and 1956.

Data on mean antler measurements and length of tarsus were presented and discussed.

Prepared by William J. Bailey, Jr.
Assistant Project Leader

Approved by Phil Agee
Project Leader

Date: April 4, 1958

A P P E N D I X

INSTRUCTIONS FOR OPERATORS OF DEER CHECK STATIONS

Data obtained at check stations gives us information needed for the successful management of our deer resource. This year we have enlisted the assistance of local people to gather the information. Your assistance in this work is greatly appreciated.

Data taken at check stations are only as good as the records we keep. Therefore, be especially careful in recording accurate information. Write legibly and attempt to keep the data sheets neat and orderly so that we can later read and interpret the information.

The hunter is the one giving us an opportunity to gather information from his deer. Be courteous and considerate at all times. You will find that most of them are willing to help. Give him all the assistance and information that you can. However, if you are asked a question and you are not certain of the correct answer, don't hesitate to tell him that you do not know. Refer the hunter to someone who is in position to answer, whether it pertains to management, regulations or to deer in general. The answers you give and the statements you make while working check stations will reflect opinions and policies of the Game Commission to the hunter. Be sure your answers are correct. Reference to your deer bulletin, Nebraska Deer, will help in answering many common questions. A technician or conservation officer will visit your station from time to time. They will be able to help you if any difficulties arise.

Important: Enclosed you will find a withholding tax statement and a time sheet.

Complete one copy of the withholding tax document and make sure it is signed.

Enter the number of hours worked each day on the time sheet.

At the close of the season, forward all materials (data sheets, withholding tax statements, time sheets and rotary daters) to: Bill Bailey
Game Commission Office
Alliance, Nebraska.

The following are instructions for operating the check station and recording data. Read these instructions carefully.

I. Check stations will be operated from 7:00 a.m. to 7:00 p.m.

II. Attach the metal seal around an antler or leg bone at the hock for each deer checked. Use the seals in numerical order. When sealing, insert the end of the seal into the open part of the lock until it clicks, then pull back, locking the seal in place. Caution! Do not insert the end of the seal into the lock until you are ready to seal the animal.

III. Cancel the permit by stamping on the face of the permit with the rotary dater. The rotary dater should show the following information: (1) Date checked; (2) town or checking station site; and (3) seal number. It will be necessary to write the seal number in the spece left by the rotary dater each time.

IV. Record all the information requested on the data sheet.

Column 1. Seal Number

Record the number of the metal seal attached to the animal.

Column 2. Permit Number

Record the number of the hunter's permit.

Column 3. Location of Kill

The method for recording location of kill will vary from one management unit to another. Therefore, read the following instructions carefully and use the method specified for the management unit in which the animal was killed.

Pine Ridge, Plains and Upper Platte Management Units

Refer to the attached map of sub-management units. Record the location of kill by entering the number designating the sub-unit in which the deer was killed. For instance, if a deer was killed in the Pine Ridge Management Unit north of Highway No. 20 and west of Highway No. 2, the location of kill would be entered as '1' on the data sheet, designating the sub-management unit in which it was killed.

Sandhills, Upper Missouri, Elkhorn and Halsey Management Units

Record the location of kill by counties, e.g., if an animal is killed in Cherry County, write Cherry County in the location of kill column.

In the Halsey Management Unit, designate the location of kill as Halsey Forest if the deer was killed on the Forest. If killed off the Forest, record the county.

Some of you, particularly those working the Plains and Upper Platte Management Units, will check deer killed in more than one management unit. Be sure to check the permit each time to determine the management unit in which the animal was taken. If your checking station is located in the Plains Unit and you check a deer taken from the Pine Ridge Unit, enter "Pine Ridge" in the remarks column. Checkers at Gering, Bridgeport, and Oshkosh should note management unit (Plains, Pine Ridge or Upper Platte) in the remarks column each time since these stations serve both the Plains and the Upper Platte Units.

Column 4. Date of Kill

Enter the date the deer was killed - not the date it was checked.

Column 5. Species

We have two species of native deer in Nebraska - the mule deer (often called black-tailed deer in local areas) and the white-tailed deer. Most of you can probably recognize one from the other but some have not had a chance to observe both species.

They are easily distinguished once you know what you are looking for. The best distinguishing characteristic is the tail. The white-tailed deer has a long wide tail (about 12 inches in length) which is brown above with a prominent white fringe along the edge and white beneath. The mule deer has a shorter tail (usually about 7 inches in length) which is mostly white above and tipped with black, the black extending all the way around.

The antlers of the males are also distinctive. Antlers of the "whitetail" have all the tines (points) arising from the main beam, similar to the points on a garden rake. In the mule deer, the main beam branches forming a fork. If more branching occurs, these tines normally fork again.

Reference to your bulletin on Nebraska Deer will help in identifying the two species.

Record "M" for mule deer and "WT" for white-tailed deer.

Column 6. Sex

You will be able to recognize the sex of adult deer judging by the presence or absence of antlers. However, it is possible that you will find a male without antlers (which probably resulted from an injury) and very rarely a female is found with antlers.

You can recognize the sex of fawns also by the antlers, although they are not usually visible. A small knob or projection occurs above and slightly behind the eye on male fawns. This is the base from which future antlers will arise. The small bumps, or "buttons" as they are commonly called, can be felt easily by rubbing the head above and behind the eyes. Females do not have these "buttons".

Record "M" for males and "F" for females.

Column 7. Age

Record "A" for adults and "F" for fawns.

Fawns can usually be distinguished from adults by their size. Most of the fawns will weigh less than 70 pounds. They will usually have smaller and more delicate body appearances. Caution: Occassionally you will find a large fawn that is as big as a small yearling doe. If you are in doubt as to the age, enter a question mark (?) on the data sheet.

V. Reports

Complete the self-addressed report card each day and send it in after the check station is closed. Prompt mailing of these report cards is essential so that daily news releases can be issued on progress of the deer harvest.

You will also find a cumulative report card enclosed. You will enter the number of deer checked each day on this card and the total checked for the entire season. Send this card in on the day after the season closes.

VI. Telephone Reports

You will report the number of deer checked each day by telephone for the first two days of the season. Call the number specified below for your check station between 6:30 p.m. and 7:30 p.m. Call Collect! This call will not take the place of your daily report card. Send in the card after making your telephone report.

You will again make a telephone report to the same number between 6:30 p.m. and 7:30 p.m. on the last day of the season. This report will include the total number of deer checked at your station for the entire season.

If any difficulties arise that require immediate attention and you cannot contact a Conservation Officer or technician, call the telephone number listed for your station.

MANAGEMENT UNIT	CHECK STATION	TELEPHONE REPORT TO
Pine Ridge	Harrison	Phone 412, Alliance
	Fort Robinson	" " "
	Crawford	" " "
	Chadron	" " "
	Rushville	" " "
Plains	Hemingford	" " "
Upper Platte	Gering	" " "
	Bridgeport	" " "
	Oshkosh	" " "
	Kimball	" " "
	Sidney	" " "
	Chappel	" " "

MANAGEMENT UNIT	CHECK STATION	TELEPHONE REPORT TO
Sandhills	Hyannis	Phone 412, Alliance
	Mullen	Phone 334, Bassett
	Cody	" " "
	Valentine	" " "
	Ainsworth	" " "
	Bassett	" " "
	Springview	" " "
Halsey	Halsey	" " "
	Burwell	" " "
Upper Missouri	Butte	" " "
	O'Neill	" " "
	Center	Phone 2875, Norfolk
	Hartington	" " "
	Ponca	" " "
	South Sioux City	" " "
Elkhorn	Neligh	" " "
	Norfolk	" " "
	Wisner	" " "

Again we would like to thank you for your cooperation and assistance.

L. P. Vance, Chief, Game Division

3 0112 115700301